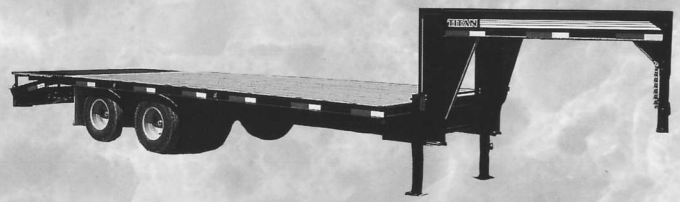


TITAN TRAILER MFG., INC.

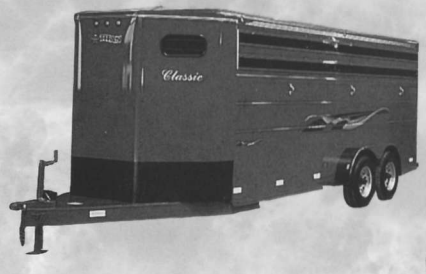
2306 HWY 77

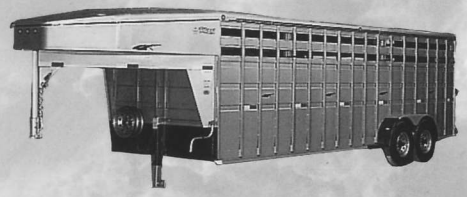
WATERVILLE, KS 66548

(785) 363-2101

FAX (785) 363-2472

TITAN





TRAILER USER'S GUIDE

INDEX

Introduction to Titan ..... Pg. 1
General Maintenance Pg.2
Tow Vehical Wiring Pg.7
Electrical and Wiring Pg.8
Wheel Bearings Pg.10
Trailer Brakes-Brakes Adjustment Pg.14
Tire Load Limits Pg.15
Tongue Jacks Pg.16
Trailer Towing Safety Tips Pg.17
Hitching Up Your Trailer Pg.19
Trailer Tactics Pg.20
Safety Check List Pg.22
Trailer Information Form Pg.23
Maintenance Schedule Pg.24
Warranty Pg.25
Maintenance Record Pg.27

CUSTOMER SERVICE

(785) 363-2101

TITAN

Horses. Stock. Flatbeds. Utility

THANK YOU FOR CHOOSING A TITAN TRAILER

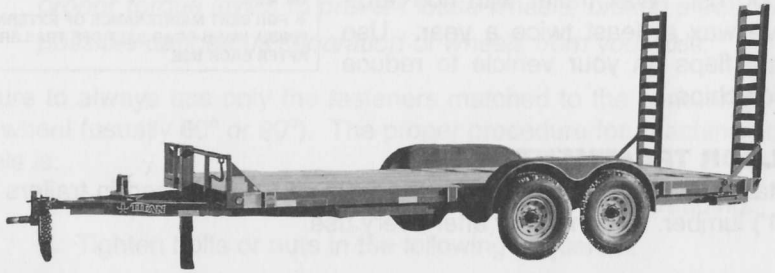
You have chosen a quality trailer from the most popular trailer manufacturer in America. Even though Titan trailers are built for the long haul, routine maintenance will assure even more years of trouble-free service.

Your complete satisfaction has and will always be our first objective at Titan. Please keep this manual in your trailer or tow vehicle and review the safety checklists before you set out on the road.

Located in Waterville, KS Titan Trailer Mfg., Inc. has been producing trailers since 1986. Titan presently employs 115 people, and continues to grow with the needs of our customers.

Titan's commitment, reputation and high standards of excellence go into every trailer. Titan's employees pride themselves in customer satisfaction. We have made every effort to produce a trailer you will be proud to own.

Again, thank you for choosing a quality Titan trailer!



GENERAL MAINTENANCE

BREAKAWAY SYSTEM

DOT regulations require that a trailer's battery keep or hold the trailer from rolling forward for 15 minutes after stopping. Check the battery on a regular basis for adequate output and charge if necessary. The proper hookup for cable is to loop it around something permanent on the tow vehicle but not the ball hitch insert or hitch. If there is a failure of any of these items, the plug pulls out of the switch and activates brakes. The plug must be pushed in completely so the brakes are not dragging. This will drain the battery if the pin remains pulled out.

THE BATTERY SUPPLIED WITH THIS KIT IS RECHARGEABLE AND MUST BE MAINTAINED.

⚠ CAUTION

- CHECK CONDITION OF BATTERY AND CHARGE PRIOR TO TRIP.
- CHARGE BATTERY PER ENCLOSED INSTRUCTIONS.
- DO NOT EXCEED 1.2 AMPS MAX. CHARGE.

ROOF VENTS

Roof vents on all Titan trailers are designed to allow light into the trailer during the daytime along with fresh air. Also warm air will escape when the vent is open. However, your roof vent is not designed to be open when traveling. Make sure that all vents are **closed** prior to towing over the road. Pop-up roof vents may remain open during travel though.

ROOF MAINTENANCE

Inspect the roof coating once a year. Check for shrinking or cracked sealant that will lead to roof leak. Titan uses high quality caulk which is available through Titan local or RV dealers. Wax your Titan roof at least 2 times a year.

EXTERIOR SKIN MAINTENANCE

Wash regular with mild soap. Use pressure washer but don't exceed 2000 psi. Wax trailer with non-abrasive wax at least twice a year. Use mud flaps on your vehicle to reduce rock chips.

⚠ CAUTION

- ALL FLOOR AND RAMP SURFACES ARE SLIPPERY WHEN COVERED WITH ICE, SNOW OR WET.
- FOR BEST MAINTENANCE OF EXTERNAL FINISH, WASH ROAD SALT OFF TRAILER AFTER EACH USE.

FLOOR TREATMENT

Titan uses CCA or pressure treated (2" x 8" non-spliced in trailers up to 24') lumber. Clean trailer after every use.

FRAME MAINTENANCE

Stock and horse trailers take the worst kind of abuse on the underneath, frame side. Anything thrown up by the tow vehicle will chip away at the frame coating. It is suggested that inspections are made periodically and any bare spots be touched up with a matching trailer frame paint.

SILVER MOD WHEEL MAINTENANCE

Your new wheels do require care to maintain their factory appearance. We strongly suggest you take a few reasonable steps to protect your investment. Typical road soils trap moisture which can cause corrosion over a period of time. Brake dust is also corrosive and can cause pitting of the wheel's finish. These soils must be removed regularly, possibly weekly, depending on your driving habits. After cleaning, always apply a coat of soft non-abrasive cream wax to help prevent surface corrosion. Surface corrosion or rust can be prevented with proper care and is not covered under warranty.

TIRES, RIMS AND LUGNUTS

⚠ CAUTION

- ON FIRST TRIP, TIGHTEN WHEEL LUGS AT START AND EVERY 50 MILES FOR FIRST 200 MILES. CORRECT TORQUE IS 90 TO 120 FOOT-POUNDS.
- THEREAFTER, CHECK WHEEL LUGS BEFORE EACH TRIP.
- FOLLOWING WINTER STORAGE, CHECK BEFORE BEGINNING A TRIP.
- FOLLOWING EXCESSIVE BRAKING, INSPECT WHEEL LUGS.

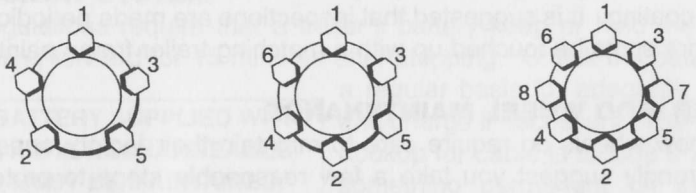
This trailer is equipped with quality tubeless tires. The recommended air pressure is found on the tire sidewall. Always replace tires with the same designated type and size. It is extremely important to apply and maintain proper wheel mounting torque on your trailer axle. Torque is a measure of the amount of tightening applied to a fastener (nut or bolt) and is expressed as length x force. For example, a force of 90 pounds applied at the end of wrench one foot long will yield 90 lbs.-ft. of torque. Torque wrenches are the best method to assure the proper amount of torque is being applied to a fastener.

NOTE: Wheel nut or bolts must be applied and maintained at the proper torque levels to prevent loose wheels, broken studs, and possible dangerous separation of wheels from your axle.

Be sure to always use only the fasteners matched to the cone angle of your wheel (usually 60° or 90°). The proper procedure for attaching your wheels is:

1. Start all bolts or nuts by hand to prevent cross threading.
2. Tighten bolts or nuts in the following sequence.

GENERAL MAINTENANCE (continued)



5 BOLT **6 BOLT** **8 BOLT**

3. The tightening of the fasteners should be done in stages. Following the recommended sequence, tighten fasteners per wheel torque chart below.

4. Wheel nuts/bolts should be torqued before first road use and after each wheel removal. Check and re-torque after the first 10 miles, 25 miles, and again at 50 miles. Check periodically thereafter.

TORQUE STAGES

1st Stage	2nd Stage	3rd Stage
20/25 ft. lbs.	55/80 ft. lbs.	Full Torque

WHEEL TORQUE REQUIREMENTS

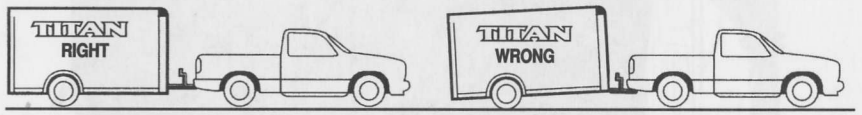
AXLE SIZE	WHEEL SIZE	STUD SIZE	STEEL WHEEL TORQUE	ALUMINUM WHEEL TORQUE
3500#	15"	1/2"	90#-120#	80#-100#
6000#	16"	1/2"	90#-120#	95#-115#
7000#	16"	9/16"	90#-120#	95#-115#
8000#	12"-16"	5/8"	90#-120#	N/A
8000#	16"	5/8"	275#-325#	N/A

Warranties on axles and trailer will not apply to damage or injuries caused by loose or improperly tightened lugnuts or broken studs. Inspect wheel stud holes for roundness. If oblong, this is a sure sign that the unit has been run with improperly tightened lugnuts. In these instances, the rim must be replaced.

DOORS, BARLOCKS AND RAMP HINGES

Door holdbacks are designed to hold doors open when on uneven ground. They are not designed to hold doors open under windy conditions. Lubricate all door and ramp hinges every 3 months with a SAE 30 weight engine oil. WD-40 and similar lubricants will free hinges, however, they will also lose all lubricating qualities within a short period of time. Door hinges are drilled and greased at the factory. Use a cone shaped grease gun tip to apply grease at door hinges. Some models have grease zerk installed in hinges.

HITCH HEIGHT



Parallel with ground and tow vehicle *Trailer not level, adjust hitch*

You must adjust the hitch ball height to position tag trailers in a level condition. This loads the axle equally and gives a desirable tongue weight. Under these conditions your trailer should ride properly and not sway back and forth.

COUPLER OPERATION

Check the coupler or Kingpin for fatigue, damage, cracks or missing parts before towing. Test the lock mechanism for complete and correct latching so the trailer will not come unhooked. For ball type couplers, make sure the coupler and ball size match. If you are using a bumper hitch type coupler, it is recommended to put a bolt or similar device through the latch mechanism when hooking to the tow vehicle for safety. It is advised that mini fifth wheel hitches should have a wheel diameter that is close to the width of Titan's Pinbox. A smaller wheel diameter does not get adequate vertical support from the Pinbox and pushes the bottom plate upward.

⚠ CAUTION
CHECK COUPLER PRIOR TO HOOKUP

GENERAL MAINTENANCE (continued)

LOADING TRAILER

You should load 60% of your cargo's weight in the front of the trailer. This will put approximately 10% of the loaded trailer weight on the hitch. If there is insufficient hitch weight the trailer will not tow properly. It could be unstable, difficult to control, and make towing unsafe. Proper weight distribution is imperative and diagramed below. Always secure trailer to tow vehicle when loading or unloading, especially from the rear of trailer.

JUDGING TONGUE WEIGHT

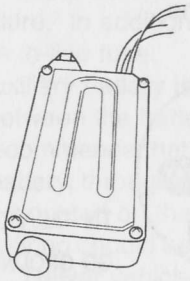
The desired hitch weight is 10% of the total loaded trailer weight. If scales are not readily available, you may estimate your total loaded hitch weight by comparing a known weight to the hitch weight. The proper way, however, to accurately measure tongue weight is by taking your loaded trailer to a local scale, such as those found at gravel companies or highway weigh station scales. Weigh the trailer and then the tongue separately and the tongue should be 10% of total loaded trailer weight. 10% tongue weight is necessary for safe towing and handling of trailer.

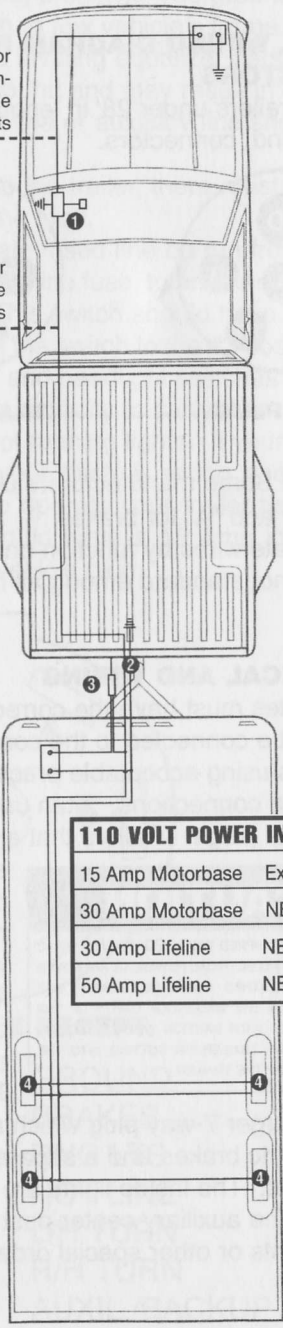
⚠ CAUTION

YOU MUST HOOK TRAILER TO TOW VEHICLE WHEN LOADING, ESPECIALLY WHEN LOADING TRAILER FROM THE REAR.

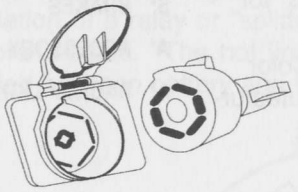
TOW VEHICLE WIRING

1 BRAKE CONTROLLER

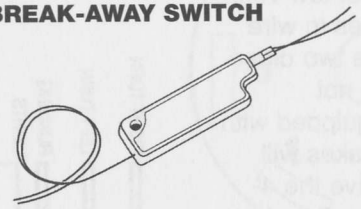




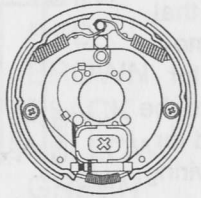
2 TRAILER CONNECTOR



3 BREAK-AWAY SWITCH



4 ROADSIDE BRAKE ASSEMBLY

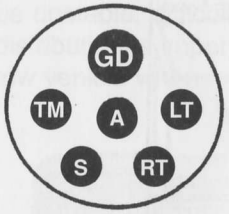


110 VOLT POWER INLET	
15 Amp Motorbase	Extension Cord
30 Amp Motorbase	NEMA L 530
30 Amp Lifeline	NEMA 3830 Rcpt.
50 Amp Lifeline	NEMA 3894 Rcpt.

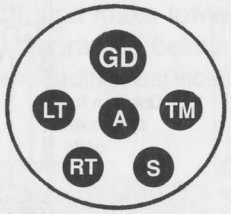
ELECTRICAL AND WIRING

TYPICAL WIRING DIAGRAM FOR 6-WAY ROUND CONNECTORS

All Titan trailers under 28' in length have the 6-way round connectors.



TRUCK PLUG



TRAILER PLUG

TM	TAIL LIGHTS	BROWN
GD	GROUND	WHITE
LT	LEFT TURN	YELLOW
RT	RIGHT TURN	GREEN
S*	BRAKES	RED
A*	ACCESSORY	BLUE
A*	BACKUP LIGHT	BLACK

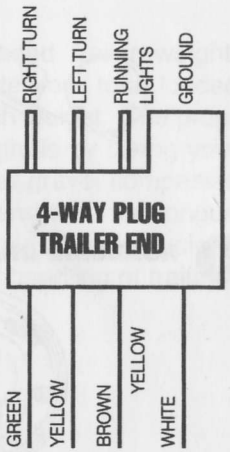
* Caution: Some manufacturers use "S" for accessory and "A" for brakes.
Note: Locate wires by function only. Color coding is not standard among all manufacturers.

ELECTRICAL AND WIRING

Tow vehicles must have the correct plug at the hitch and be connected to the correct tow vehicle circuits using acceptable practices in wire routing and connections. Titan uses two different types of plugs. Trailers that are not equipped with brakes will have the 4-way flat plug like the wiring code pictured at right. Trailers that have the larger 7-way plug which accommodates electric brakes and a separate line for inside lights. The inside lights are wired to the #4 post. The auxiliary center post is used for backup lights or other special order/use wiring.

⚠ CAUTION

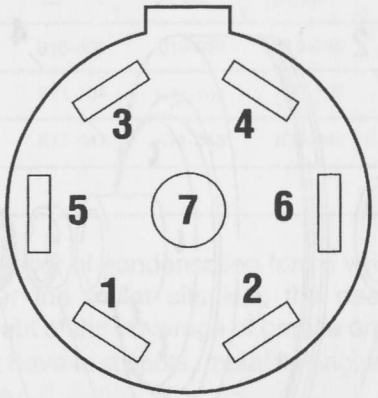
THIS TRAILER IS EQUIPPED WITH 120 VOLT/60 HZ/AC (HOUSE CURRENT) ELECTRICAL POWER. UL APPROVED NON-METALLIC SHEATHED CABLE (IE. ROMEX) HAS BEEN INSTALLED IN THE WALL/ROOF CAVITY OF THE TRAILER. PROCEED WITH CAUTION WHEN ATTACHING EQUIPMENT TO THE TRAILER OR CUTTING INTO THE ROOF OR WALLS OF THE TRAILER.



It is important to ground the wiring properly. The ground wire should run from the plug and attach to tow vehicle's frame. Hitches, coupler/ball, safety chains and load leveling equalizer bars will NOT provide an adequate continuous ground and may result in electrical system failure. In addition, any hot line or auxiliary line should be run with an in-line fuse.

If an auxiliary battery is added to the trailer, there must be a fuse installed between the battery and the load.

Titan recommends that a separate fused line be run from the tow vehicle's battery, through a 20 Amp in-line fuse, to an aftermarket toggle switch mounted on the dash. This switch should have a 20 Amp capacity. Wiring should be run from the switch to the #3 post for running lights. Newer vehicles' wiring and headlight switches are many times marginal and do not have the capacity to carry the current required for larger trailers with lots of running lights. If your tow vehicle has amber turn signals, see your hitch & wiring specialist for installation of a relay or "splitter" to operate your trailer turn signals and brake lights. The hot line should have a 15 Amp in-line fuse installed between battery and tow vehicle plug.



TOW VEHICLE RECEPT.

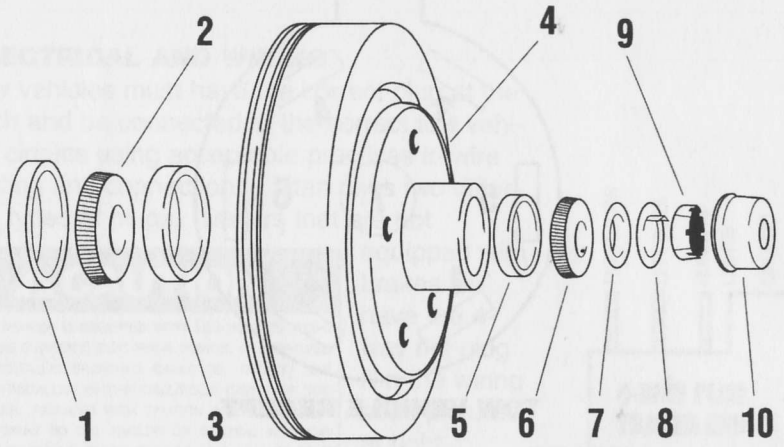
WHITE	1	GROUND
RED	2	BRAKES
BROWN	3	RNG LTS
BLACK	4	HOT LINE
YELLOW	5	L/H TURN
GREEN	6	R/H TURN
BLUE	7	AUXIL./BACKUP LIGHTS

WHEEL BEARINGS

Trouble-free trailering depends upon proper bearing lubrication, maintenance and inspections. Bearings fail when lubrication fails or when improperly adjusted. In both cases, heat build up occurs. Normal bearing operating temperature is up to 140° and can be touched by hand without burning. Above this temperature, the grease will start to fail and destroy the bearings, drum and/or the spindle. Brakes are designed to operate at up to 600°F. A good practice for both experienced and new trailer owners is to touch each hub within ten miles of starting out when bearings have been repacked and at each stop along the way. (Do not try testing the hub after several miles of continuous hard braking). This will give an advanced warning of pending trouble so corrections can be made prior to failure and breakdown. Remember, inactivity can be more damaging to bearings than everyday use. When a trailer is parked, many times the spindle, bearings or hub is warm.

⚠ CAUTION

INACTIVITY CAN BE MORE DAMAGING TO BEARINGS THAN EVERYDAY USE



1—Grease Seal
2—Inner Bearing
3—Inner Cup
4—Hub/Drum
5—Outer Cup
6—Outer Bearing
7—Spindle Washer
8—Tang Washer
9—Spindle Nut
10—Grease Cap

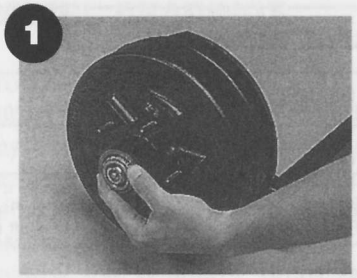
BEARING, RACE & SEAL NUMBERS							
Axle Size	3500#	6000#	7200#	8000#	10000#	10000#HD	12000#
Brake Size	10x2 1/4	12x2	12 1/4 x2 1/2	12 1/4 x3 3/8	12 1/4 x3 3/8	12 1/4 x4	12 1/4 x5
Typical Bolt Pat.	6 on 5 1/2" Bolt Circle	8 on 6 1/2" Bolt Circle	8 on 6 1/2" Bolt Circle	8 on 6 1/2" Bolt Circle	8 on 6 1/2" Bolt Circle	8 on 6 1/2" Bolt Circle	8 on 6 1/2" Bolt Circle
Inner Bearing	L68149	25580	25580	25580			
Inner Race	L68111	25520	25520	25520			
Outer Bearing	L44649	14125A	02475	02475			
Outer Race	L44610	14276	02420	02420			

GREASE SEALS						
National	—	—	470972	470972	370219BG	370219BG
NOK	AD2267-EO	AD2548-EO	AD8717-EO	AD8717-EO	—	—
Chicago Rawhide	533409	—	21352	21352	—	—
Dexter Replacements		010-009	010-036	010-036	010-063	010-063
Magnet Kit	N/A	K71-104	K71-105	K71-105	K71-441	K71-375
Shoe & Lining	N/A	K71-047	K71-048	K71-048	K71-410	K71-049 LH
Electric Brakes						K71-050 RH

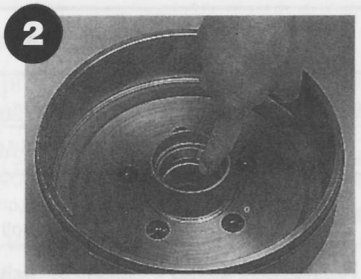
As these cool down, a spot of condensation forms which is the start of a rust spot. The longer the trailer sits idle, the deeper this rust spot becomes. When in doubt of the coverage of grease on bearings – inspect and replace those that have rust spots, metal flaking, wear, cage damage or other visual damage.

If you ever have questions regarding maintenance requirements or how to perform a maintenance task, please do not hesitate to contact us at our customer service hotline listed below or on the back of this manual. A Titan representative will be glad to answer your questions. Ask for a Customer Service Representative at:

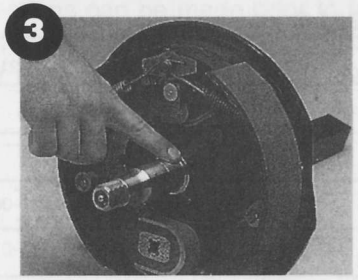
1-785-363-2101



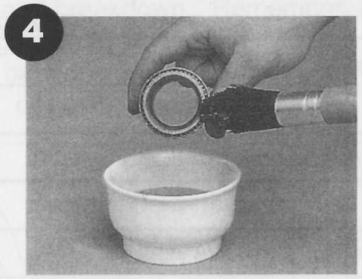
REMOVE HUB ASSEMBLY
Pry dust cap off with screwdriver. Straighten out tang washer. Remove spindle nut, tang washer and spindle washer. Pull hub toward you to loosen outer bearing. Do not let bearing fall. Pull the hub assembly off spindle. The inner bearing and seal will come with it. Pry out the inner seal and discard. The inner bearing will now come out. Caution-do not remove seal by hitting inner bearing.



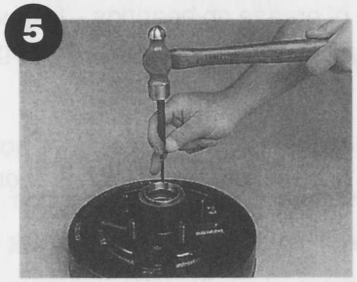
INSPECT BEARING RACES (CUPS) AND HUB
Inspect races for pitting, rusting, frosting, scoring, metal flaking and other obvious damage. If damaged, remove with brass bar or mild steel bar. Inspect race seat and remove any burrs or nicks that prevent the race from seating correctly. Replace races and bearings in sets.



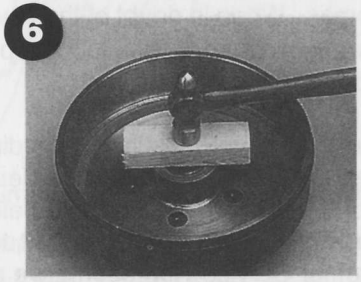
CLEAN AND INSPECT THE SPINDLE
Clean spindle with solvent to remove old grease, inspect the spindle for nicks, scratches, scoring, damaged threads, or bending. File off nicks or burrs and smooth out with emory cloth. Apply thin film of bearing grease to spindle.



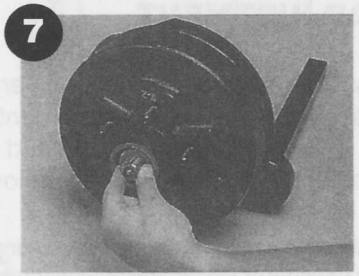
CLEAN AND INSPECT BEARINGS (CONES)
Clean bearings with solvent and long bristled brush. DO NOT use air pressure to clean out old grease or to dry. Allow to air dry, inspect bearings for pitting, rusting, frosting, scoring, metal flaking, cage damage or other obvious damage. Replace all damaged bearings and mating races in sets.



INSTALL RACE (CUP)
Using a brass bar or a mild steel bar to drive in new race into hub until solidly seated against hub shoulder. Use caution to not damage race surfaces. Never use a bearing to drive a race.

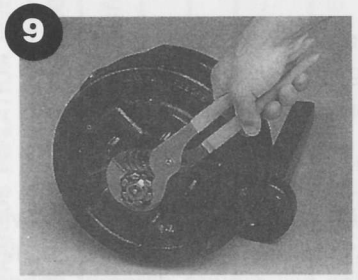


INSTALL GREASE SEAL
Install new seals when they leak or when bearings are being visually inspected. Install inner bearing in hub, then the seal. Make sure the seal is installed correct side in. Use soft wood to seal in flush with hub.

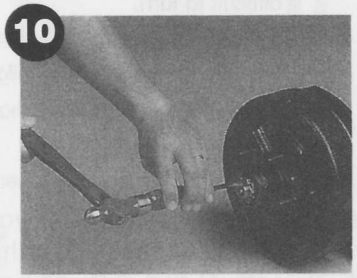


INSTALL HUB ASSEMBLY
Slide the hub over the spindle with care not to damage the seal or spindle threads.

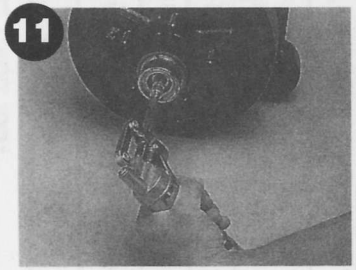
Seat the hub against the seal journal. Insert the outer bearing, D-Shaped spindle washer, tang washer, and spindle nut.



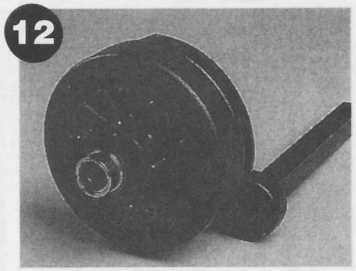
ADJUST BEARING
Using a 12" wrench on the spindle nut apply 50ft-lb of torque at the same time the hub is rotated counterclockwise. Leave the hub stationary while backing off the spindle nut to relieve the preload torque. Then hand tighten



the spindle nut to the first slot that lines up with a tang on the washer. Flatten the tang into the slot as far as it will go. Use caution that the tang is not fractured in this step. The correct adjustment for all bearings is .001 to .012 end play.



FILL WITH GREASE
Apply nozzle of grease gun to the grease zerk at the end of the spindle. Pump grease into the assembly until it comes out around the spindle washer.



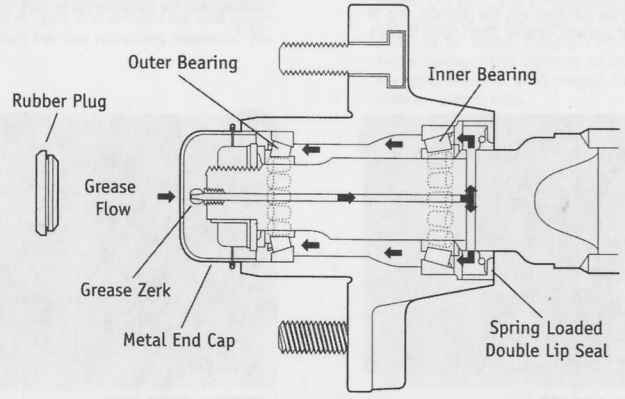
INSTALL DUST CAP
Install dust cap with rubber plug. Care must be taken so that cap goes on evenly and is not crimped on inner lip. Cap is fully seated when rib on the cap is up against the hub all the way around. This prevents grease from being thrown out of hub onto the rim.

TRAILER BRAKES-BRAKE ADJUSTMENT

Brakes must be adjusted after the first 200 miles of operation when the brake shoes and drums have seated. After the initial adjustment the brakes should be readjusted at 3000 mile intervals or as use and performance requires. The brakes should be adjusted in the following manner:

1. Jack up trailer and secure on adequate capacity jack stands. Lifting and supporting must be on the main I-beams or the perimeter tube frame that the axle is attached to. Check that the wheel and drum rotates freely.
2. Remove the adjusting hole cover from the adjusting slot on the bottom of the brake backing plate.
3. With a screwdriver or standard adjusting tool, rotate the starwheel of the adjuster assembly to expand the brake shoes. Adjust the brake shoes out until the pressure of the linings against the drum makes the wheel very difficult to turn.
4. Now rotate the starwheel in the opposite direction until the wheel turns freely with a slight lining drag. Usually 8 clicks.
5. Replace the adjusting hole cover and lower the wheel to the ground.
6. Repeat the above procedure on all brakes.

See your hitch specialist for your brake controller. They will provide a brake controller manual which gives information on proper controller adjustments. Load and road conditions will require different sensitivity settings of the controller. Heavy loads will need maximum sensitivity as opposed to an empty trailer which will require a very light braking action.



EZ-LUBE HUBS

See EZ-Lube Hub instructions in Dexter service manual. Lube hubs every 12 months or 12,000 miles. Check the Dexter Service Manual for recommended wheel bearing lubrication specifications.

TIRE LOAD LIMITS

MATCH AIR PRESSURE & TIRE CAPACITY TO WEIGHT ON AXLES

TIRE LOAD LIMITS (LBS) AT VARIOUS INFLATION PRESSURES (PSI) COLD

TIRE SIZE	PSI 20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125
(Letters in parenthesis denote load range for which **BOLD FACE** loads are maximum)																						
ST205/75R14	1030	1170	1300	1430	1530	1640	**1760(C)**															
ST205/75R15	1070	1120	1360	1480	1610	1720	**1820(C)**															
ST225/75R15	1260	1430	1600	1760	1880	2020	2150	2270	2380	**2540(B)**												
Note: capacity limited to 2150 lbs. @ 50 PSI when mounted on 5 bolt wheel																						
LT235/85R16				1700	1870	2030	2205	2335	2485	2623(D)	2765	**3042(E)**	3170	3300	3415	3550	3675	**3750(G)**				
Note: Load range G tire requires compatible wheel, cannot be used with standard 16" wheels																						
215/75R17.5																3695	3860	4020	4180	4340	4495	4650 **4805(H)**
Note: Load capacity limited to 4500 lbs. @ 125 PSI with Dexter 17-241 single wheel																						

⚠ CAUTION

USE ONLY APPROVED TIRE AND WHEEL COMBINATIONS. FAILURE TO COMPLY WITH LOAD AND INFLATION LIMITS MAY RESULT IN SERIOUS INJURY OR DEATH.

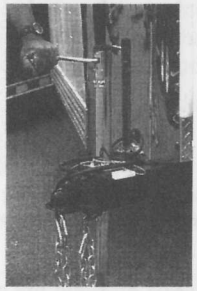
The information shown above is valid only for trailer (ST) or light truck (LT) design tires. Passenger car tires (P designation) used in trailer service must be de-rated 10% from the maximum load capacity branded on the tire sidewall (branded load capacity divided by 1.10 equals the load capacity for trailer service.)

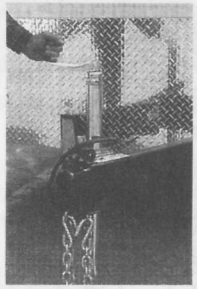
Actual unit or axle load ratings will be determined by the lowest rated component (Tire, Wheel, or Axle)

VENDOR DOORS AND TONGUE JACKS

TONGUE JACKS FOR BUMPER-PULL MODELS

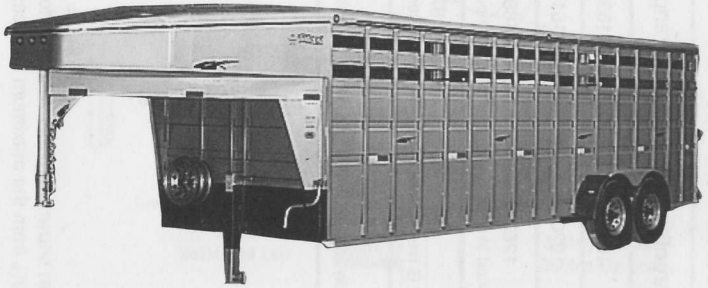
Titan trailers uses manual tongue jacks. Lubrication and proper maintenance of jacks will enhance jack life and make operation smoother. The type that Titan uses, the top-wind jack, has an access hole on the front side that will allow oil to be sprayed into the threaded rod. By using a product similar to ANTI-SEIZE TECHNOLOGY's product no. 17061, you will be able to free up rusty and corroded parts, and it leaves a protective anti-rust film. Some spray-on lubricants will only provide short term lubrication and will need to be reapplied more frequently than once a year.





FIFTH WHEEL AND GOOSENECK LANDING GEAR

These kinds of trailers are equipped with a one speed, single landing gear. If you have questions, please contact us at: 1-785-363-2101.



TRAILER TOWING SAFETY TIPS

INSTABILITY

Swaying (or whipping) of a tow vehicle/trailer combination at low speeds may get worse as speed increases. If this happens, take your foot off the gas pedal. Steer straight ahead while manually applying the trailer brakes. Then brake gently after the combination has begun to stabilize itself. Stabilizer or weight equalizing bars will help reduce trailer sway and may also be required by law in some states.

⚠ CAUTION

NEVER INCREASE SPEED WHEN TRAILER IS SWAYING OR WHIPPING

Check cargo first to be sure that trailer is loaded heavier in the front. If not, reposition the load so you get 10% of the total trailer weight on the tongue. Next, make certain the rear of the tow vehicle is not overloaded. Then check for wheel wobble on both vehicles caused by bearing failure, loose lug nuts or loose spindle nuts. Now check the tow vehicle's suspension alignment. Finally, make sure that you are not exceeding the recommended maximum speed limit for safety and IT'S THE LAW.

If the above instructions have been followed, instability should now be corrected. If not, something may be wrong with your tow vehicle.

TIPS FOR BEGINNER (ALSO SEE HITCHING UP ON P. 19)

Place your hand at the bottom of the steering wheel. While watching in your outside mirrors, if you want the rear of the trailer to go to the right, move your hand to the right. If you want the rear of the trailer to go to the left, move your hand to the left. If the trailer starts to jackknife—STOP—pull ahead to straighten out then start procedure over again. When making turns, be aware the trailer will turn quicker than a tow vehicle. Allow extra turning space so that the trailer wheels don't jump over a curb, hit a soft shoulder, road sign or tree. Your axle and/or tire and rim can be severely damaged as a result or from hitting the curb at a bad angle and too hard.

⚠ CAUTION

TRAILER TURNS QUICKER THAN TOW VEHICLE. ALLOW EXTRA TURNING SPACE FOR TRAILER

CHECK YOUR POLICY

Most automobile and some homeowners insurance policies will provide some coverage for stock and flatbed trailers. They should also provide for you a "grace period" of a set number of days from the date of purchase. Call your agent.

HITCH AND BRAKE SAFETY

For safe towing it is the trailer owner's responsibility to CORRECTLY MATCH the combination of tow vehicle and trailer.

1. MATCH the maximum trailer weight allowed for the tow vehicle to the GVWR of the trailer.

2. MATCH the hitch weight carrying capacity of the tow vehicle with the loaded tongue weight of the trailer. This is generally 10% of GVWR on tag models and 20% of GVWR on 5th wheels and Goosenecks. Tag models may require a weight distributing hitch with sway controls. Contact your hitch specialist to properly set up your tow vehicle/trailer combination.

3. MATCH the size of the brake controller to the number of braking wheels on your trailer. These are sold usually as 2 to 4 wheel brake or 2 to 6 wheel brake units. For proper controller adjustment, see your brake controller manual.

4. MATCH the wiring of the the tow vehicle to the wiring code on the trailer. Ensure your tow vehicle does have a ground wire running from the receptacle to the frame.

5. MATCH the ball size to the coupler size.

6. MATCH your Fifth Wheel or Gooseneck trailer to a correct and compatible hitch provided by your hitch specialist. Then consult your hitch specialist for proper maintenance of the hitch assembly.

7. MATCH your rear vehicle suspension to the loaded hitch weight of the rear axle of the tow vehicle.

All marginal situations should be corrected for safe trailering. Remember, you are the one that will be trying to control a large combination of weight and size at high speeds. It is your responsibility to set up tow vehicle/trailer properly. Contact or confirm your set-up with a local hitch company professional.

GROSS TRAILER WEIGHT (GTW) & TONGUE WEIGHT (TW)		
CLASS I 2,000 lbs. (GTW) 200 lbs. (TW) Compact Cars	**CLASS II** 3,500 lbs. (GTW) 300 lbs. (TW) Mid Size Cars & Small Pick Ups	**CLASS III** 3,500-5,000 lbs. (GTW) 300-500 lbs. (TW) Minivans
CLASS III 4,000 lbs. (GTW) 350 lbs. (TW) Mid Size Cars Small Pick Ups Minivans	**CLASS IV** 5,000-10,000 lbs. (GTW) 500-1,000 lbs. (TW) Pick Ups SUV's	**CLASS V** 14,000 lbs. (GTW) 1,700 lbs. (TW) 20,000 lbs. (GTW) 2,000 lbs. (TW)

HITCHING UP YOUR TRAILER

Hitching up a trailer to your tow vehicle is usually a one-person job, but it is easier if someone helps you. Here are a few of the basic steps:

1. Release the coupler locking device.

2. Check under the coupling to ensure the ball clamp is below the ball and not riding on top of it.

3. Latch the coupler to the hitch ball. Make sure it is locked in place by lifting up the trailer tongue.

4. Make sure your jack is fully raised.

5. If you have a weight distributing hitch with spring bars, follow the above procedures. Then attach the spring bar chain to the trailer and tighten it until your trailer and car are in normal, level position.

6. If your trailer has a surge brake breakaway cable or chain, attach the cable or chain to your tow vehicle, allowing enough slack for you to make tight turns.

7. Attach the safety chains.

8. Connect the trailer wiring harness to the lighting system of your tow vehicle and check its operation (also see page 7 in this manual for details).

TRAILER TACTICS

With a trailer in tow, you're operating a vehicle combination that is longer, heavier and sometimes wider and taller, than you're used to. So you'll have to make some compensating adjustments in your normal driving practices. The following is advice in trailering tactics:

Take a "Shakedown Cruise". At least one short trial run before your first trip will help familiarize you with your trailer's operating characteristics. It will also allow you to check the trailer's lights, brakes, hitch, etc., and let you know they are all working properly.

Slow down. Moderate to slower driving speeds put less strain on your tow vehicle and trailer and make for safer traveling.

Allow extra time and space between your rig and traffic. You will need both when passing and stopping, especially if your trailer is not equipped with brakes.

Check rear view mirrors. Doing this frequently will let you know that your trailer is riding properly. We recommend outside rear view mirrors on both sides of your tow vehicle.

Swing wider. You need to make wider swings (turns) at curves and corners because your trailer's wheels are generally closer to the inside of a turn than the wheels on your tow vehicle.

Pass with extra care and caution. It takes more time and distance to get around a slower vehicle and return to the correct lane when you've got a trailer in tow.

Watch the wind direction and speed. To avoid swaying, be prepared for sudden changes in air pressure and wind buffeting when larger vehicles pass from either direction. Slow down a bit and keep a firm hold on your steering wheel. Aim straight down your lane.

Conserve fuel. You'll go farther on a tank of gas at moderate speeds. Higher speeds increase wind resistance against the trailer and reduce fuel mileage.

Avoid sudden stops and starts. This can cause skidding, sliding, or jackknifing, even if your trailer has brakes. Avoid quick stops while turning. Smooth, gradual starts and stops will improve your gas mileage.

Signal your intentions. Let surrounding vehicles know what you intend to do well in advance before you stop, turn, change lanes, or pass.

Shift to a lower gear. A lower gear will help ease the load on the transmission and engine when going over steep hills, sand, gravel, or dirt roads. If your tow vehicle has an "overdrive" gear, shifting out of overdrive to a lower gear may improve your gas mileage.

Always be courteous. Make it as easy as possible for faster moving vehicles to pass you. Keep to the right of the road and prepare to slow down if passing vehicles need extra time to return to their proper lane.

Don't tailgate. Allow at least one car and trailer length between you and the vehicle ahead for each 10 mph on your speedometer. Three seconds should be the minimum distance.

If a problem occurs don't panic. Stay calm and cool. Say you experience a sudden bumping or fishtailing. It may indicate a flat tire. Don't jam on the brakes or mash the accelerator in an attempt to drive out of it. Instead, come to a stop slowly as you keep driving in as straight a line as possible. If conditions permit, coast to a very slow speed and try to avoid braking, except when your wheels are straight ahead and your trailer and tow vehicle are in line with each other.

If your trailer begins to fishtail as you accelerate to highway speed, back off the accelerator a bit. This should stop the fishtailing. If it begins again as you increase speed, stop and check your load. It probably isn't distributed evenly from side to side, or it is too far back to put a sufficient load on the hitch ball. It is recommended that 10% of the trailer load be on the hitch. (See page 17 for more details). Redistribute the load as necessity dictates before continuing on the highway.

SAFETY CHECKLIST

- ❒ Maintenance Checklist (Up to Date)
- ❒ Hitch Ball Tight
- ❒ Hitch Ball Lubricated
- ❒ Hitch Secured in Receiver
- ❒ Safety Chains Crossed and Attached*
- ❒ Coupler Latched onto Ball
- ❒ Load Distributed Correctly and Securely
- ❒ Trailer Level when Hooked Up
- ❒ Trailer Lights Working Correctly
- ❒ Lug Nuts Checked and Tightened
- ❒ Inspect Tires for Cuts
- ❒ Tire Pressure Checks
- ❒ Breakaway Battery Charged
- ❒ Breakaway Cable Hooked Up
- ❒ Pin or Bolt through Coupler Latch
- ❒ Block Tires when Loading and Unloading

** If safety chains are too long, twist to shorten.*

THE MAIN CAUSES OF TRAILERING ACCIDENTS

1. Driver error.
2. Failure to MATCH speed with weather and road conditions.
3. Trailer sway due to improper loading—more or less than 10% cargo hitch weight.
4. Failure to perform routine maintenance.

Remember, never carry passengers in trailer while moving. Check hub temperature at each stop. Adjust sensitivity of brake controller to match load. 102" axles are legal on all Federally-funded highways (and some state highways).

FACTORY SERVICE

Call the Titan Customer Service number to schedule a quality factory service. They can retrofitting, reskining, accident repairs or any other service your dealer can't do. And let Titan handle the jobs your dealer may not want to do. Whatever it takes, Titan is dedicated to your complete satisfaction.

TRAILER INFORMATION FORM

Fill in the information form below for future use. This critical information should be used for quick reference when ordering genuine Titan replacement parts, factory service or refer to it if you should have a warranty claim. Keep it handy so Titan can serve you promptly and efficiently.

Owner:		
Address:		
City:	State:	Zip:
Date Purchased:		
Dealership:		
Dealership phone number:		
Address:		
City:	State:	Zip:
Model No.:	Tire Size:	
Serial (VIN) No:	Hitch Size:	
Color Name: (from copy of order)		

MAINTENANCE SCHEDULE

Item	Function Required	Every Trip	3000 mi 3 months	6000 mi 6 months	12000 mi 12 months	pg #
Coupler	Check for fatigue & latching operation	●				5
Safety Chains	Check for dragging & possible strength loss	●				
Breakaway System	Check battery charge & switch operation cable for damage	●				2
Lugnuts	Check for correct torque	●				3-4
Pigtail	Check for dragging & stress	●				
Lights	Check that all are operating	●				
Axle & Spring Bolts	Check for correct torque & elongation of the shackle link holes			●		
Tires	Check pressure & unusual wear	●				15
Bearings	Repack				●	10-13
Hinges	Lubricate		●			5
Stabilizer Jack-screw	Lubricate threaded rod			●		20
Hydraulic Fluid	Check fluid level			●		
Roof Sealant	Inspect for cracks or drying out				●	2
Wheels	Inspect for cracks indentations	●				3-5
Jacks	Lubricate				●	16
Brakes	Check for operation	●				14
Brake Adjustment	Adjust for optimum performance		●			14
Inspect Frame Welds	Check for cracking			●		

WARRANTY

Manufacturer's Warranty

Titan Trailer Manufacturing warrants that its products will be free from defects in materials and/or workmanship to the original purchaser for a period of five (5) years from the date of purchase providing the conditions are met and satisfied.

The attached warranty card must be completed and returned to Titan Trailer Mfg., Inc., Waterville, KS 66548. These documents must be filed with the manufacturer within 30 days of date of purchase to validate the warranty.

The warranty does not cover the following items, which are not manufactured or constructed by Titan Trailer Mfg., Inc. The respective manufacturer with a copy of it warrants these components available upon request from Titan Trailer Mfg., Inc.

Axle Assemble — 1 year limited warranty.
Coupler — warranty as per manufacturers policy.
Jack Assembly/Landing Gear — warranty as per manufacturer policy.
Wheels — warranty and/or adjustment made by manufacturers representative.
Tires — warranty and/or adjustment made by manufacturers representative.

Normal wear items will not be replaced due to wear. These items include bearings, brake linings, hoses, etc.

Titan Trailer Mfg., Inc. is not responsible for damage caused by the abuse or by the misapplication or misuse of the trailer. Loading in excess of the Gross Vehicle Weight Rating stated on the certification plate will invalidate the warranty.

Paint warranty does not cover wear, deterioration and/or damage from road elements, improper wash solvents, salt, sand and/or weather condition.

Any modification to the Titan Trailer without prior written authorization from the factory will void this warranty.

WARRANTY (continued)

Manufacturer's Warranty continued

Any Titan Trailer found to have defective material or workmanship must be serviced or corrected by an authorized factory representative or by the Titan Trailer Factory. Any Titan Trailer authorized representative may make repair and/or adjustments under this warranty repair and/or adjustments and cost to repair or adjust is agreed upon and approved by Titan Trailer Factory. Titan Trailer will not make reimbursements for any repairs an/or adjustments made without prior written consent.

Titan Trailer will not be responsible for any consequential or incidental damages incurred as a result of any defect to include loss of time, inconvenience, loss of use of vehicle.

Titan Trailer reserves the right to make changes in design or make addition and/or improvements without being obligated to install or modify same upon other products covered by this warranty.

When required photos of defective part or parts of the actual part or parts may have to accompany the warranty approval before payment can or will be made. Any part or parts returned for warranty must be pre-paid freight to Titan Trailer Mfg., Inc.

Titan Trailer reserves the right to decide if the workmanship or material defect should be serviced at the factory. Titan Trailer will not allow any reimbursement for transportation to and from the factory or the authorized place of repair.

THIS WARRANTY IS EXPRESSLY MADE IN LIEU OF ANY AND ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS AND NO ONE IS AUTHORIZED TO MAKE ANY FURTHER OR ADDITIONAL WARRANTIES ON BEHALF OF TITAN TRAILER MFG., INC.

MAINTENANCE RECORD

DATE	MILES	SERVICE PERFORMED

MAINTENANCE RECORD (continued)

DATE	MILES	SERVICE PERFORMED

NOTES